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09/692,927

10/20/2000

Richard Stirling-Gallacher

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12/12/2006

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EXAMINER

PHU, PHUONG M

ART UNIT

PAPER NUMBER

2611

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

4

Office Action Summary

Application No.

09/692,927

Applicant(s)

STIRLING-GALLACHER, RICHARD

Examiner

Phuong Phu

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11, 14, 15 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11, 14, 15 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the RCE filed on 10/20/06 and Amendment filed on 9/20/06. Accordingly, claims 11, 14, 15 and 18 are currently pending; and claims 1-10, 12-13, 16-17 and 19-30 are canceled.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 11, 15 and 18 are rejected under 35 U.S.C. 102(a) as being anticipated by the prior art admitted by the applicant, (hereafter referred as the admitted prior art).

-Regarding to claim 11, see figure 3 and page 2, lines 7-14 of specification of the instant application, the admitted prior art discloses a turbo decoder operative to use a soft output Viterbi algorithm, said turbo decoder (see figure 3) comprising:

a first decoding unit (25);

a second decoding unit (30), wherein an output of the first decoding unit is connected to an input of the second decoding unit (via (25, x, 28)), and an output of the second decoding unit is connected to an input of the first decoding unit (via (+, x, 26)); and

a first normalization unit (27), wherein an output of the first normalization unit is connected to the output of the first decoding unit (via (+, x)).

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-Regarding to claim 15, as similarly applied to claim 11 set forth above and herein incorporated, the admitted prior art discloses a turbo method operative to use a soft output Viterbi algorithm, said turbo decoding method (see figure 3) comprising:

procedure (25, 30) of providing a first decoding unit (25) and a second decoding unit (30), wherein an output of the first decoding unit is connected to an input of the second decoding unit (via (25, x, 28)) and an output of the second decoding unit is connected to an input of the first decoding unit (via (+, x, 26));

procedure (27) of normalizing data obtained from the first decoding unit by connecting the output of a first normalization unit to the output of the first decoding unit (via (+, x)).

-Regarding to claim 18, the admitted prior art discloses that the data obtained from the use of the first decoding unit is normalized with normalization factor (C1), (see figure 3), variable during operation (see specification, page 2, lines 16-37). The admitted prior art further teaches that data (outputted from (30) (see figure 3)) obtained from the use of the second decoding unit (30) is directly inputted to device (31); or in another word, it can be said that the data (outputted from (30) (see figure 3)) obtained from the use of the second decoding unit (30) is normalized with a time constant normalization factor (having a value of 1) before being inputted to device (31).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Doetsch et al (6,571,366), prior art of record.

-Regarding to claim 14, the admitted prior art does not teach whether the turbo decoder is comprised in a mobile communication device, as claimed.

Doetsch et al teaches that turbo coder/decoder can be applied in Mobile communication systems/devices for correcting error due channel distortion during transmission (see col. 2, lines 7-10 on page 2 of front pages, col. 2, lines 6-37).

Therefore, for an application, it would have been obvious for one skills in the art to utilize the admitted prior art turbo decoder in a mobile communication device, as taught by Doetsch et al, in such a way that a turbo coder would be used to code signals to be transmitted and the mobile communication device would use the turbo decoder for decoding the transmitted signals, which are received by the mobile communication device, for correcting error occurred in the transmitted signals due channel distortion during transmission so that the transmitted signals would be recovered in the mobile communication device.

Response to Arguments

6. Applicant's arguments with respect to the rejections to claims 11, 14, 15 and 18, under 35 USC 112, have been considered. The rejections have been withdrawn since the claims were amended and overcame the rejection. However, the claims are not allowable because of reasons set forth above in this Office Action.

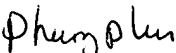
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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 571-272-3009. The examiner can normally be reached on M-F (8:00 AM - 4:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Phuong Phu
11/29/06

**PHUONG PHU
PRIMARY EXAMINER**

Phuong Phu
Primary Examiner
Art Unit 2611